

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Appln. No. 09/753,591)
First Named Applicant: JESSE A. JURRENS)
Filed: January 3, 2001)
For: MOTORCYCLE AIR BAG SUSPENSION)
TC/A.U.: 3683)
Examiner: Pamela Rodriguez)

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MEMO SUPPORTING PRE-APPEAL BRIEF REQUEST FOR REVIEW

In connection with the Notice of Appeal being submitted herewith, this "Pre-Appeal Brief Request for Review" is also being submitted to request review of the issues identified below, and a direction for reversal of the pending rejections is respectfully requested.

Claims 38 through 43 and 46 through 67 have been rejected under 35 U.S.C. Section 103(a) as being unpatentable over Harris in view of Wenham. It is submitted that the rejection set forth in the Office Action does not set forth a prima facie case of unpatentability based upon the allegedly obvious combination of Harris and Wenham for the following reasons.

Significantly, independent claim 38 requires, in part, that "the housing completely encloses the air-bag", independent claim 46 requires that "the housing abuts against substantially an entire circumference of the air-bag" and independent claim 47 requires that "the housing extends along and about an entire extended length of the air-bag". In the rejection, the Harris patent is relied upon as allegedly disclosing various elements of the claims, but it is conceded that "Harris does not disclose that his housing completely encloses the air bag". It is then it is contended that:

Wenham is relied upon merely for his teachings of an air bag suspension system (see the Figure) forming a shock absorber 5 which includes at least one air bag, the air bag is completely enclosed within a housing assembly (see the Figure and the outer housing for the air bag of assembly 5).

And it is further asserted that:

It would have been obvious to one of ordinary skill in the art at the time the invention was made to have constructed the air bag suspension system of Harris to include an air bag enclosed completely within a housing assembly as taught by Wenham as an effective means of sealing the air bag from the environment. By constructing the air bag to be fully enclosed within the housing assembly, outside dirt, debris, and other such contaminants would be prevented from damaging the air bag.

However, contrary to the above assertion, it is submitted that one of ordinary skill in the art, considering the entirety of the discussion in the Harris patent, would not be led to modify the Harris apparatus with aspects of the Wenham patent in the manner alleged to be obvious in the rejection.

Moreover, the rejection does not identify why one of ordinary skill in the art would completely abandon the “partial restraining sleeve” structure advocated by Harris to create a “side acting force” that is the primary object set forth for the apparatus disclosed in the Harris patent. More specifically, the Harris patent describes a “horizontal side load” effect that is caused by the use of a “*partial* restraining sleeve” in the Harris apparatus. One example of the importance to Harris of the use of the partial sleeve is in the Abstract of Harris that states (emphasis added):

A vehicle suspension strut incorporating an airspring around a hydraulic shock absorber is disclosed. The unique airspring design and orientation relative to the shock absorber axis creates a side acting force which counteracts the bending torque acting on the strut during operation in a vehicle and prevents binding of the shock absorber piston. The horizontal side load is achieved using a partial restraining sleeve which circumferentially shrouds the flexible member of the airspring. The partial restraining sleeve extends less than half way around the circumference of the airspring flexible member and has a radius less than the fully inflated radius of the flexible member thereby creating a restraining force on only one side of the flexible member of the airspring.

Thus, it is made clear to one of ordinary skill by the Abstract that the key function of the Harris apparatus is the creation of a horizontal “side acting force”, and also that the key to creating this side acting force is a “*partial* restraining sleeve” that “extends *less than half way* around the circumference of the air spring flexible member”. It is submitted that this literal and explicit discussion in the Harris patent would not reasonably lead one of ordinary skill in the art to the allegedly obvious modification of the Harris patent set forth in the rejection. In fact, one of ordinary skill would read Harris as teaching against any modification of the Harris sleeve that would destroy or counteract the creation of the side acting force by the partial restraining sleeve—such as by the allegedly obvious adoption of the structure of the Wenham strut, or any attempt to

“completely enclose” the flexible member of Harris. This modification would eliminate the “side acting force” that is the crux of the Harris apparatus.

As further evidence of this purpose, Harris states at col. 1, lines 40 through 64 that (all emphasis added):

The *object* of this invention is to provide a suspension strut utilizing an airspring which generates *side load* compensating force. The force counteracts the bending torque created by the mass of the vehicle in operation and minimizes stiction in the hydraulic damper of the strut. This yields a softer ride. The airspring gives the ability to achieve variable spring rates as well as a constant vehicle height maintainable regardless of load by adjusting the internal pressure of the airspring portion of the strut. The *side load compensating force* is achieved by utilizing a *partial* restraining sleeve which restricts the radial expansion of the flexible member of the airspring around a *limited portion* of the circumference of the airspring. The partial restraining sleeve is positioned diametrically opposite to the line of action desired for the side load compensating force. The point of contact of the partial restraining sleeve to the flexible member is at a lesser distance from the strut axis than the unrestrained inflated radius of the flexible member of the airspring. This restraint of the flexible member on only a portion of its circumference creates a side load compensating force on the airspring portion of the strut thereby providing the ability to offset the bending torque exerted by the sprung mass of the vehicle in which the suspension strut is mounted.

It is submitted that this statement in Harris that creation of the side load force is *the object* of the Harris system could only lead one of ordinary skill in the art away from the allegedly obvious modification set forth in the rejection—and is further evidence of the “non-obviousness” of the modification of Harris proposed in the rejection. One of ordinary skill would recognize that “completely enclosing” the flexible member of the airspring, as it is alleged in the rejection that Wenham teaches, would completely eliminate this primary objective of the Harris patent and its airspring. Harris includes other statements along these lines that will not be further discussed for the sake of brevity.

It is well established in the patent law that a proposed modification is not considered to be “obvious” when it renders the prior art structure unsuitable for its intended purpose. See MPEP §2143.01(V), where it is stated that (underline emphasis added):

If proposed modification would render the prior art invention being modified unsatisfactory for its intended purpose, then there is no suggestion or motivation to make the proposed modification. *In re Gordon*, 733 F.2d 900, 221 USPQ 1125 (Fed. Cir. 1984)

It is submitted that any attempt to “completely enclose” the flexible member of Harris using the structure of Wenham would eliminate the side acting force of the Harris structure (as the “side load”

would be applied to all sides of the flexible member) and thus the eccentric loading of the flexible member achieved by the partial sleeve would be lost. Despite this, it is stated in the final Office Action that (emphasis added):

[T]he examiner contends that the Wenham reference is merely being relied upon to show that completely enclosing an air bag assembly within a housing is known and would provide an effective means of sealing the air bag from the environment. While the examiner recognizes that the Harris patent designs his restraining sleeve to create a side acting force, the teachings of Wenham would merely lead one of ordinary skill in the art to the conclusion that completely enclosing the air bag is a possibility and would protect the air bag assembly from dirt, debris, and other such contaminants. Contrary to applicant's remarks, the examiner does not conclude that the Wenham reference would teach away from the objective of the Harris patent, but instead provide an alternative means to better shield and protect the air bag.

However, it is submitted that, even if one believes that Wenham shows the “possibility” of “completely enclosing the air bag” of Harris, the “possibility” is meaningless if the modification would render the Harris apparatus unable to perform the explicit purposes and objects set forth in the Harris patent as evidenced above. The final Action further states that (emphasis added):

[T]he examiner is not abandoning the known solution of the air bag 30 of Harris, but rather improving upon the air bag structure itself in light of the teachings of Wenham. The fact remains that while the Harris patent may not expressly describe the need for a fully encapsulated air bag, this doesn't preclude the teachings of Wenham of such an assembly from teaching such to one of ordinary skill in the art. This problem addressed in the obviousness modification, while not expressly discussed in the patents themselves, is not beyond the realm of one of ordinary skill in the art to recognize. Contamination of a shock absorber air bag such as Harris' is a fact and is something usually of concern in shock absorber design. So again, while this problem addressed in the combination is not stated in the references, it doesn't mean that the problem would not exist.

It is submitted that the discussion in the Harris patent regarding the importance of a partial restraining sleeve to the object of Harris makes it clear to one of ordinary skill in the art that any modification of the sleeve to “completely enclose the air bag” is an abandonment of the functionality that is key to Harris—and that the modification is not an “improvement” of the Harris air bag structure if the desired functionality is lost. It is not simply a matter of whether one of ordinary skill in the art might recognize some benefit in completely enclosing the Harris air bag, but whether the skilled artisan would recognize that Harris clearly indicates that partial (and not complete) enclosure is necessary to achieve the primary purpose of the Harris patent. Further, the question is not simply whether the Examiner can “improve[e] upon the air bag structure itself in light of the teaching of Wenham”, but whether one of ordinary skill in the art would make the

modification to the detriment of the existing functionality of the Harris apparatus. It is submitted that the Examiner is relying upon unsupported statements of personal knowledge of benefit without due regard for the effect that the modification would have on the purpose of the existing art. It is further stated in the Office Action that (emphasis added):

[T]he examiner is merely relying upon her knowledge of the shock absorber art to formulate her rejections. Contrary to applicant's remarks, the examiner's obviousness modification isn't without merit. The examiner contends that the problem being addressed by the asserted combination (i.e., completely enclosing the air bag within the housing) is a "problem that is addressed" by the Harris patent. Harris' air bag 30 is not completely enclosed within the housing 40 and in light of Wenham's teachings, one of ordinary skill in the art would glean that fully enclosing the air bag within a shock absorber housing would protect the air bag from damage incurred from its operating environment. The air bag of Harris would be susceptible to potential puncture or wear from factors such as road spray and debris and this would be a problem that could be addressed by the patent, if for no other reason, due to the structural arrangement of the Harris air bag. Therefore, the examiner maintains the problem being addressed by the asserted combination of references is a concern to the art being relied upon.

However, it is submitted that the Examiner cannot simply override the clearly stated purpose of the Harris patent and insert a new "solution" to an unstated problem that would remove the solution to the explicitly identified problem, and it is further submitted that the Harris patent clearly indicates to one of ordinary skill in the art that the use of a partial sleeve is necessary to the solution.

Reversal of the §103(a) rejection of claims 38 through 43 and 46 through 66 is therefore respectfully requested.

In light of the foregoing, early reconsideration and allowance of this application are most courteously solicited.

Respectfully submitted,

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